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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/849,998	05/19/2004	Zhongde Wang	7293-086	8764
7590	03/22/2005			
Ariel S. Rogson Marger Johnson & McCollom, P.C. 1030 S.W. Morrison Street Portland, OR 97205			EXAMINER MAHONEY, CHRISTOPHER E	
			ART UNIT 2851	PAPER NUMBER

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/849,998

Applicant(s)

WANG ET AL.

Examiner

Christopher E. Mahoney

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 May 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-8,10,13-19,22-28 and 31-36 is/are rejected.
- 7) ☒ Claim(s) 2,3,9,11,12,20,21,29 and 30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

Claims 2-3, 9, 11-12, 20-21, 25, 29-30 and 34 are objected to because of the following informalities:

Regarding claims 2-3, 11-12, 20-21, and 29-30, while  $x_p[x, y]$  and  $y_p[x, y]$  are defined by the equations, what  $x$ ,  $p$ ,  $x_p$  and  $y_p$  are is not defined in the claims. While it is understood that  $x$  and  $y$  are coordinates for a projected image, exactly what these elements stand for should be defined in the same manner the elements (such as  $d$ ,  $db$  and  $\beta h$ ) are defined in the independent claims.

Regarding claim 9, 25 and 34, the examiner believes "title" should be "tilt".

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4, 6, 10, 13, 15-16, 19, 22-23, 26-28, 31-32 and 35-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Kawashima. Kawashima teaches an image projector to project an image a set of inherent parameters including a horizontal resolution, a vertical resolution, a depth ( $L1$ , S502, S506), and a vertical offset ( $L4$  or  $\Delta y$ ); a receiver 2 to receive a

Art Unit: 2851

vertical tilt angle and a horizontal tilt angle, and a corrector 5 to compute keystone correction corner points for the image using the set of inherent parameters and the tilt angles.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-8, 17-18, 24-25 and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima. It would have been obvious to one of ordinary skill in the art at the time the invention was made to perform the horizontal and vertical scaling in either order for the purpose of starting the scaling since both must be done and there is no advantage of doing one before the other.

Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima in view of Su (U.S. Patent No. 6,686,973). Kawashima teaches the salient features of the claimed invention except for the receiver determining the tilt angles. Su teaches in the abstract that it was known to utilize a receiver which determined tilt angles. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the features taught by Su for the purpose of automating the angle determination process. The applicant should note that it has been held that automation of a known manual process involves only routine skill in the art. *In re Venner*, 120 USPQ 192.

*Allowable Subject Matter*

Claims 2-3, 9, 11-12, 20-21, 29-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher E. Mahoney whose telephone number is (571) 272-2122. The examiner can normally be reached on 8:30AM-5PM, Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christopher E Mahoney  
Primary Examiner  
Art Unit 2851